

- 5. (Amended) A method for inspecting a semiconductor wafer surface according to Claim 1, wherein the forms and types of defects and the like are determined depending on a combination of A, B, and a value given by A/B, where the detected light intensity or standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the detected light intensity or standard particle conversion size of the LPD detected in a low-angle light optic is B.
- (Amended) A method for inspecting a semiconductor wafer surface according to Claim 1, wherein the forms and types of defects and the like are determined based on Table 1, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Table 1

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Relations between A and B or ranges	Actual for ms
$A \ge B \times 1 . 13$	Stacking Fault
A < B × 1 . 13	Non-epi-layer originated extraneous
	\\ substance (adherent particle)
B < 90 nm and A > 107 nm	\\ Micro-crystallographic-defect
	(hillock, shadow, dislocation)
B > 160 nm and A < 107 nm	Abnormal growth (large-pit, projection)
Others	Abnormal product

- 7. (Amended) A method for inspecting a semiconductor wafer surface according to Claim 1, wherein the semiconductor wafer is a mirror-finished semiconductor wafer.
- A method for inspecting a semiconductor wafer surface according to Claim 1, wherein the forms and types of defects and the like are determined based on Table 2, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light

optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Table 2

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Relations between A and Bor ranges	Actual for ms
$A \ge B \times 1 . 13 \text{ as}$	Scratch, flaw, and shallow pit
B < 90 nm and A > 10 ሺ nm	
$A < B \times 1$. 13	Adherent particle or COP
B ≤ 85 nm and A < 107 nm	Grown-in defect in bulk near surface

Please add the following new claims:

10. A method for inspecting a semiconductor wafer surface according to Claim 2, wherein a laser surface inspection apparatus having at least two light optics to one incidence is used as a laser surface inspection apparatus.

11. A method for inspecting a semiconductor wafer surface according to Claim 2, wherein the semiconductor wafer is an epitaxial semiconductor wafer.

12. A method for inspecting a semiconductor wafer surface according to Claim 2, wherein the forms and types of defects and the like are determined depending on a combination of A, B, and a value given by A/B, where the detected light intensity or standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the detected light intensity or standard particle conversion size of the LPD detected in a low-angle light optic is B.

A method for inspecting a semiconductor wafer surface according to Claim 2, wherein the forms and types of defects and the like are determined based on Table 1, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light

A3 cont. optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Table 1

Relations between A and B or ranges	Actual for ms
A ≥ B × 1 . 13	Stacking Fault
A < B × 1 . 13	Non-epi-layer originated extraneous
	substance (adherent particle)
B < 90 nm and A > 107 nm	Micro-crystallographic-defect
	(hillock, shadow, dislocation)
B > 160 nm and A < 107 nm	Abnormal growth (large-pit, projection)
Others	Abnormal product

- 14. A method for inspecting a semiconductor wafer surface according to Claim 2, wherein the semiconductor wafer is a mirror-knished semiconductor wafer.
- 15. A method for inspecting a semiconductor wafer surface according to Claim 14, wherein the forms and types of defects and the like are determined depending on a combination of A, B, and a value given by A/B, where the detected light intensity or standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the detected light intensity or standard particle conversion size of the LPD detected in a low-angle light optic is B.
- A method for inspecting a semiconductor wafer surface according to Claim 2, wherein the forms and types of defects and the like are determined based on Table 2, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Cont A3 Table 2

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Relations between A and B or ranges	Actual for ms
$A \ge B \times 1$. 13 or	Scratch, flaw, and shallow pit
B < 90 nm and $A > 107 nm$	
A < B × 1 . 13	Adherent particle or COP
B ≤ 85 nm and A < 107 nm	Grown-in defect in bulk near surface

A method for inspecting a semiconductor wafer surface according to Claim 7, wherein the forms and types of defects and the like are determined based on Table 2, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Table 2

Relations between A and B or ranges	Actual for ms
$A \ge B \times 1$. 13 or	Scratch, flaw, and shallow pit
B < 90 nm and A > 107 nm	
A < B × 1 . 13	Adherent particle or COP
B < 85 nm and A < 107 nm	Grown-in defect in bulk near surface

A method for inspecting a semiconductor wafer surface according to Claim 14, wherein the forms and types of defects and the like are determined based on Table 2, where the standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the standard particle conversion size of the LPD detected in a low-angle light optic is B.

Table 2

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Relations between A and B or ranges	Actual for ms
$A \ge B \times 1$. 13 or	Scratch, flaw, and shallow pit
B < 90 nm and A > 107 nm	
A < B × 1 . 13	Adherent particle or COP
B ≤ 85 nm and A < 107 nm	Grown-in defect in bulk near surface

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- 19. A method for inspecting a semiconductor wafer surface according to Claim 10, wherein the semiconductor wafer is an epitaxial semiconductor wafer.
- 20. A method for inspecting a semiconductor wafer surface according to Claim 10, wherein the forms and types of defects and the like are determined depending on a combination of A, B, and a value given by A/B, where the detected light intensity or standard particle conversion size of a LPD (Light Point Defect) detected in a high-angle light optic is A, while the detected light intensity or standard particle conversion size of the LPD detected in a low-angle light optic is B.